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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,197	02/25/2004	Yuki Nakajima	023971-0383	3372
23428 7590 06/11/2009 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER				
ALL, MOHAMMAD M				
ART UNIT		PAPER NUMBER		
3744				
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06/11/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/785,197

**Applicant(s)**

NAKAJIMA ET AL.

**Examiner**

MOHAMMAD M. ALI

**Art Unit**

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

***Election/Restrictions***

Newly submitted claim 19 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claim 19 relates to supports and structural member belonging to different class 312 and 248.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 19 has been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.  
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeshi et al (EP 1049234 A2) in view of Staffia (5,732,769) and Ashenfelter (4,576,555). Takeshi et al disclose a drive unit 10 for an electric vehicle comprising a motor M, an inverter H, a speed reducer (see column 8, lines 37-40), a first refrigerant (water) receiving heat of at least one of the motor and the inverter and outputting the heat into the atmosphere through radiator R; second refrigerant (lubricating oil) receiving heat of at least one of motor and the speed reducer and outputting heat to the first refrigerant through a heat exchanger C; the heat exchanger C transferring the heat of second refrigerant to the first refrigerant. See Fig.1, column 6, line 44 to column 9, line 2. Also see Fig. 5, 6,11, 12 and 14; differential drive pinion gear 45, differential ring gear 52 and differential D, see Fig. 3 and Para [0041]; the inverter U as shown in Fig. 5, mount on the part of the drive unit case 10 and integrated with drive unit case 10, see Para [0047] and lines 18-23. Takeshi et al disclose the invention substantially as claimed as stated above except another cooling passage being disposed inside of the cooling passage through which the second refrigerant is passed and the heat exchanger being disposed at a bottom of the drive unit. Staffia teaches a cooling passage between external pipe 1 and internal pipe 2 through which (see arrow 5) a second refrigerant (lubricating oil) is passed and the another refrigerant (cooling water) is passed through the internal pipe 4 disposed inside the second refrigerant passage as shown by arrow 7 in a vehicle oil cooling system for the purpose of cooling lubricating oil and Ashenfelter teaches the use of a heat exchanging pipe 54 with cool refrigerant exchanging heat with the lube oil in the sump 70 both disposed under a drive unit 20 for

the purpose of cooling lubricating oil. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the drive unit of Takeshi et al., in view of Staffia and Ashenfelter such that the passage of other refrigerant could be provided through the passage of a second refrigerant and the heat exchanger being disposed at the bottom of the drive unit in order to exchange heat with the lubricating oil to cool it at a place where it gathers in a sump of a drive unit. Regarding claims 2-7, 9-11, 14-15 and 18, the specific configuration of inverter and speed reducer; it is an obvious to have a specific configuration of the above objects since there is no criticality or unexpected result from it. Regarding the pan, the Examiner considers the oil sump 70 as shown in Fig. 1 of Ashenfelter is the pan of second refrigerant and the lower inner surface of water passage 54 as the pan of the first refrigerant.

### ***Response to Arguments***

Applicant's arguments filed 03/16/09 have been fully considered but they are not persuasive. The applicants argue that Ashenfelter fails to cure the deficiencies of Takeshi. The Examiner disagrees. Takeshi disclose the invention substantially as claimed as stated in the rejection above except the location of the heat exchanger at the bottom of the compressor housing. Ashenfelter teaches the use of lubricating oil heat exchanger disposed at the bottom of the compressor housing (14) with refrigerant cooling pipe (54) disposed at the bottom portion of the compressor housing (14) for the purpose of heat exchanging to the lubricating oil collected in the oil sump (70) disposed

at the bottom of the compressor housing (14) to cool the lubricating oils. Therefore, Ashenfelter fails to cure the deficiencies of Takeshi is not correct and acceptable.

The Applicants further describes the oil cooler of Ashenfelter and misinterprets the construction and functional relation to the heat exchanger of Takeshi. Lubricating heat exchanger disposed at the bottom of the compressor housing is well known to an ordinary skill of art. For evidentiary reference the applicants may see an oil heat exchanger (8) of a compressor (1) which is disposed at the bottom of the compressor 1. See Figs 1-4 of US Patent 3,548,612 to Mamoru Mitsunayashi et al. Therefore, the misinterpretation of oil cooler of Ashenfelter as given by the Applicants is not acceptable.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD M. ALI whose telephone number is (571)272-4806. The examiner can normally be reached on maxiflex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl J. Tyler can be reached on 571-272-4808. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mohammad M Ali/  
Primary Examiner, Art Unit 3744